C. L. KEMPF.

PHOTOGRAPHIC PLATE-HOLDER.

No. 188,377. Patented March 13, 1877.

Fig. 1.

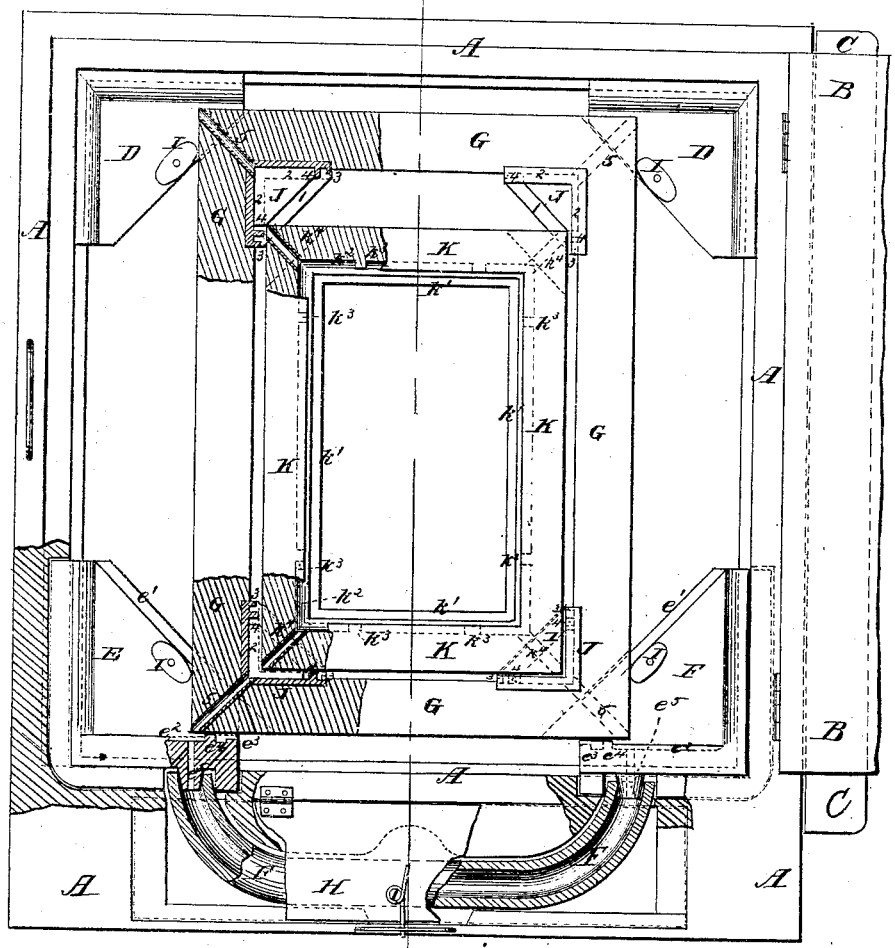


Fig. 2.

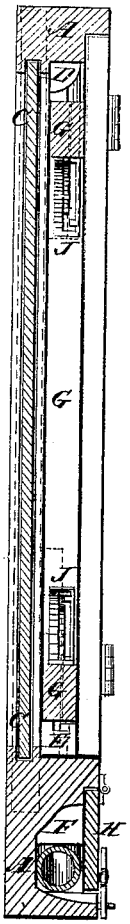


Fig. 3.

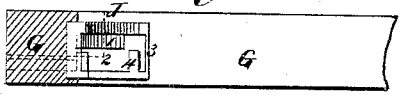
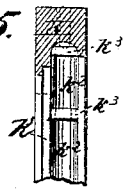


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE

CHARLES L. KEMPF, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PHOTOGRAPHIC-PLATE HOLDERS.

Specification forming part of Letters Patent No. **188,377**, dated March 13, 1877; application filed December 11, 1876.

To all whom it may concern:

Be it known that I, CHARLES L. KEMPF, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Photographic-Plate Holders for Cameras, of which the following is a specification:

Figure 1 is a front view of my improved holder open, and parts being broken away to show the construction. Fig. 2 is a vertical section of the same, taken through the line *x x*, Fig. 1. Fig. 3 a is detail section of the kit-frame for glass plates, showing one of the corners. Fig. 4 is a detail view of one of the double reversible corners for the main frame. Fig. 5 is a detail section of the ferrotype kit-frame.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved holder for photographic plates, which shall be so constructed as to enable the solution to be saved, and at the same time to protect the said frame from being destroyed by the solution.

The invention consists in the double reversible corners provided with the rabbet along their inclined edges, the groove along their lower flange, the rib, the projection, and the spout, to adapt them to receive and carry off the solution; in the kit-frame corners, provided with the rabbet along their inclined edges, the grooves along both flanges, the ribs, and the projections at the ends of the grooves, in combination with the tubes passing through the angles of the said kit-frame; in the ferrotype kit-frame, made with the rabbet, the grooves, and the perforated ribs, and provided with the tubes; and in the curved solution-bottle, provided with a mouth at each end, in combination with the recessed bottom bar of the frame, and with the two corners, as hereinafter fully described.

A is the main frame, which is provided with a door, B, and a slide, C, in the usual way. D are the upper corners, which are made in the usual way. E are the lower corners, which are made with a rabbet, e^1, along their inclined edges. Along the lower flange of the corners E is formed a groove, e^2, which is closed at its outer end by a low rib, e^3, and has a projection, e^4, upon its outer side, near its end, which does not project entirely across said groove, a space being left for the solution to flow around it.

From the bottom of the groove e^1 a hole leads down through a projection, e^5, upon the lower side of the corner E, and which serves as a spout to conduct the solution into the mouth of the bottle F. With this construction the solution that runs down the side edges and face of the plate runs down the rabbet e^1 into the groove e^2, and the solution that runs along the bottom edge of said plate passes over the rib e^3, strikes against the projection e^4, and drops down into the groove e^2. From the groove e^2 the solution flows into the bottle F without having touched the main frame A. The bottle F is made curved, and with a mouth at each end, so as to receive the solution from each of the corners E. The bottle F is placed in a recess in the bottom bar of the frame A, and is covered with a door, H, to prevent any light from passing in through or around said bottle. The knobs I upon the corners D E enable the kit-frame G or plate to be reversed when desired. J are the corners for the kit-frame G, which are made with a rabbet, 1, along their inclined side, with a groove, 2, along the flange of the two sides, with low ribs 3 across the ends of the grooves 2, and with projections 4 upon the outer sides of the grooves 2, higher than, and at a little distance from, the ribs 3. From the angle of the corners J small tubes 5 lead out diagonally through the angles of the frame G to conduct the solution to the corners E, whence it flows into the bottle F. G is the kit-frame for glass plates, which need to be supported only at the corners, as they are not liable to spring.

For ferrotype-plates, which must be supported all along their edges, the kit-frame K is used. The shoulder of the frame K, upon which the plate rests, has a rabbet, k^1, formed in it to receive the solution from the face of the plate, and conduct it to the lower corners of said frame. The inner edges of the frame K have grooves k^2 formed in them to serve as channels to conduct the solution to the lower corners of the frame. The edges of the plate rest against ribs k^3, formed across the grooves k^2, and which have cavities left between them and the bottoms of the said grooves, to allow

the solution to flow through. The corners of the frame K have small tubes k^4 placed in them diagonally, through which the solution flows into the corners J or E, and passes thence to the bottle F.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The double reversible corners E, provided with the rabbet e^1 along their inclined edges, the groove e^2 along their lower flange, the rib e^3, the projection e^4, and the spout e^5, to adapt them to receive and carry off the solution, substantially as herein shown and described.

2. The kit-frame corners J, provided with the rabbet 1 along their inclined edges, the grooves 2 along both flanges, the ribs 3, and the projections 4 at the ends of the grooves 2, in combination with the tubes 5, passing through the angles of said kit-frame, substantially as herein shown and described.

3. The ferrotype kit-frame K, made with the rabbet k^1, the grooves k^2, and the perforated ribs k^3, and provided with the tubes k^4, substantially as herein shown and described.

4. The curved solution-bottle F, provided with a mouth at each end, in combination with the recessed bottom bar of the frame A, and with the two corners E, substantially as herein shown and described.

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Witnesses:

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